

What is claimed is:

- 1 1. A method comprising:
 2 verifying a use of a digital credential; and
 3 storing a result of the verification in an activity
 4 log.
- 1 2. The method of claim 1 further including storing
 2 transaction information in the activity log.
- 1 3. The method of claim 2, wherein the transaction
 2 information includes at least one of a message that was
 3 signed using a digital signature key of the digital
 4 credential, a value of a transaction, an online service,
 5 an internet protocol (IP) address, a date of the
 6 transaction and a time of the transaction.
- 1 4. The method of claim 1 further including generating an
 2 activity report from the activity log, wherein the
 3 activity report lists the stored verification results.
- 1 5. The method of claim 4 further including associating a
 2 name to a digital signature key of the digital
 3 credential, wherein the activity report lists the name of
 4 the digital signature key.

1 6. The method of claim 4, wherein generating the activity
2 report includes generating the activity report upon
3 request by an owner of the digital credential.

1 7. The method of claim 4, wherein generating the activity
2 report includes generating the activity report each time
3 the digital credential is verified.

1 8. The method of claim 4, wherein generating the activity
2 report includes generating a report periodically.

1 9. The method of claim 1 further including analyzing the
2 activity log to detect misuse of the digital credential.

1 10. The method of claim 6, wherein generating the activity
2 report includes listing activity for a plurality of
3 digital signature keys associated with the owner.

1 11. The method of claim 1 further comprising:
2 authorizing one or more delegates to use a delegated
3 digital credential to act on behalf of the owner of the
4 digital credential for specified functions, wherein
5 verifying the use of the digital credential includes
6 determining whether the delegated digital credential was
7 authorized for the specific use.

1 12. The method of claim 4, wherein generating an activity
2 report includes activity reports of the delegates of the
3 user.

1 13. An article comprising a computer-readable medium having
2 computer-executable instructions stored thereon for
3 causing a computer to:

4 verifying a use of a digital credential; and
5 storing a result of the verification in an activity
6 log.

1 14. The article of claim 13, wherein the computer-executable
2 instructions cause the computer to store transaction
3 information in activity log.

1 15. The article of claim 14, wherein the transaction
2 information includes at least one of a message that was
3 signed using a digital signature key of the digital
4 credential, a transaction value, an online service
5 processing the transaction, an internet protocol (IP)
6 address of a computing device originating the
7 transaction, the date of the transaction and the time of
8 the transaction.

1 16. The article of claim 13, wherein the computer-executable
2 instructions cause the computer to generate an activity

report from the activity log, wherein the activity report lists the stored verification results.

17. The article of claim 16 and further including associating a name to a digital signature key of the digital credential, wherein the activity report lists the name of the digital signature key.

18. The article of claim 16, wherein the computer-executable instructions cause the computer to generate the activity report upon receiving a request by an owner of the digital credential, periodically, or when the digital credential is verified.

19. The article of claim 13, wherein the computer-executable instructions cause the computer to analyze the activity log to detect misuse of the digital credential.

20. The article of claim 17, wherein the computer-executable instructions cause the computer to list in the activity report activity for a plurality of digital signature keys associated with the owner according to the name of the digital signature key.

21. The article of claim 20, wherein the computer-executable instructions cause the computer to authorize one or more delegates to use a delegated digital credential to act on

behalf of the owner of the digital credential for specified functions and determine whether the delegated digital credential was authorized for the specific use.

22. The article of claim 21, wherein the computer-executable instructions cause the computer to generate activity reports of the delegates.

23. A system comprising:

a server to verify digital credentials; and
an activity log coupled to the server to store results from the verification.

24. The system of claim 23, wherein the activity log is configured to store transaction information for each authentication result.

25. The system of claim 24, wherein the transaction information includes at least one of a digitally signed message, a date of the transaction, a value of the transaction, an online service requesting the authentication, an internet protocol (IP) address, a value of the transaction, and a time of the transaction.

26. The system of claim 23, and further comprising an owner database to store information of an owner of the digital credential and owner-approved delegates.

1 27. An article comprising a computer-readable medium having
2 data structures stored thereon comprising:

3 a first data field to store a result from an
4 verification of a digital credential; and

5 a plurality of data fields to store transaction
6 information relating to each verification result.

1 28. The article of claim 27, wherein the plurality of data
2 fields store at least one of a digitally signed message,
3 a date of the transaction, a time of the transaction, a
4 value of the transaction, an online service, an internet
5 protocol (IP) address of a computing device originating
6 the transaction, and goods or services involved in the
7 transaction.

1 29. The article of claim 27, wherein the data structures
2 further include a plurality of data fields to store owner
3 and delegate information.

1 30. A method comprising:

2 receiving information describing a use of a digital
3 credential;

4 storing the use information in an activity log; and
5 generating an activity report based on activity log.

1 31. The method of claim 30, wherein the use information
2 includes transaction information.

1 32. The method of claim 30, wherein the use information
2 includes verification information for the digital
3 credential.

1 33. The method of claim 31, wherein the transaction
2 information includes at least one of a message that was
3 signed, a transaction value, an online service, an
4 internet protocol (IP) address, a value of the
5 transaction, a date of the transaction and a the time of
6 the transaction.

1 34. The method of claim 30, wherein the digital credential
2 includes a digital signature key, and further wherein
3 generating the activity report includes associating a
4 name to the digital signature key and listing the name of
5 the digital signature key.

1 35. The method of claim 30, wherein generating the activity
2 report includes generating the activity report upon
3 request by an owner of the digital credential.

1 36. The method of claim 30, wherein generating the activity
2 report includes generating the activity report each time
3 the digital credential is verified.

1 43. The method of claim 42, wherein generating an alert
2 includes generating an activity report based on the use
3 information.

1 44. The method of claim 42, wherein generating an alert
2 includes alerting a credential service provider.

1 45. The method of claim 42, wherein the use information
2 includes transaction information.

1 46. The method of claim 42, wherein the use information
2 includes verification information for the digital
3 credential.

1 47. The method of claim 45, wherein the transaction
2 information includes at least one of a message that was
3 signed, a transaction value, an online service, an
4 internet protocol (IP) address, a value of the
5 transaction, a date of the transaction and a the time of
6 the transaction.

1 48. A method comprising:
2 receiving transaction requests from a plurality of
3 users, wherein the transaction requests include digital
4 credentials for the users;
5 processing the transaction requests; and

communicating transaction information to a central service, wherein the transaction information includes the digital credentials of the users.

49. The method of claim 48, wherein processing the transaction requests includes communicating the digital credentials to the central service for verification.

50. The method of claim 48, wherein processing the requested transaction includes:

verifying the digital credential; and

communicating a result of the verification to the credential service.

51. The method of claim 48 further including receiving a activity report from the central service, wherein the activity report lists the transaction information for each digital credential.

52. The method of claim 48, wherein the transaction information includes at least one of a message that was signed, a transaction value, an online service, an internet protocol (IP) address, a value of the transaction, a date of the transaction and a the time of the transaction.

3 53. A method comprising:

4 receiving a request from a medical professional to
5 access medical information, wherein the request includes
6 a digital credential for the medical professional;

7 communicating transaction information describing the
8 access request and the digital credential to a credential
9 verification service;

10 receiving a verification result from the credential
11 verification service;

12 providing the medical professional access to the
13 medical information based on the verification result; and

14 receiving an activity report from the credential
15 verification service, wherein the activity report list
16 the transaction information, the digital credential and
17 the transaction result.

1 54. The method of claim 53, wherein the transaction
2 information includes at least an access type, a date of
3 the transaction and a time of the transaction.

1 55. The method of claim 53, further wherein the digital
2 credential was provided by a credential issuing service
3 and a credential service provider.

1 56. The method of claim 53, and further including:

2 receiving a request to access the activity report

from an owner of the digital credential; and

providing the owner access to the activity report.